



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
-----------------	-------------	----------------------	---------------------	------------------

10/762,472

01/23/2004

Jeffrey S. Haggard

0818.0154C

4936

27896

7590

11/29/2006

EDELL, SHAPIRO & FINNAN, LLC
1901 RESEARCH BOULEVARD
SUITE 400
ROCKVILLE, MD 20850

EXAMINER

BODAWALA, DIMPLE N

ART UNIT

PAPER NUMBER

1722

DATE MAILED: 11/29/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/762,472

Applicant(s)

HAGGARD, JEFFREY S.

Examiner

Dimple N. Bodawala

Art Unit

1722

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 23 January 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-33 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1- 8, and 10-33 is/are rejected.
- 7) ☒ Claim(s) 9 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 23 January 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

Election/Restrictions

Claims 33 – 54 are withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected a method of forming the fiber extrusion pack for extruding the molten material to form an array of fibers, there being no allowable generic or linking claim. Election was made **with** traverse in the reply filed on January 23rd, 2004.

Response to Arguments

Applicant's election with traverse of a fiber extrusion pack for extruding the molten material to form an array of fibers in the reply filed on January 23rd, 2004 is acknowledged. The traversal is on the ground(s) that the claim 33 should not be restricted because claim 33 depends from claim 22, which falls within the group I. Further, claim 33 includes the recitation of a distribution plate that includes all of the features of the split distribution plate of claim 22. This is not found persuasive because even though claim 33 depends on claim 22 because of the recitation of distribution plate, claim 33 discloses different apparatus such as the spunbond apparatus with different element such as the spin beam, and claim 22 discloses the

split distribution plate for use in a fiber extrusion pack rather than the spin beam as an element of the apparatus, and thus claim 33 is patentably distinct and independent. The search required for claim 22 is not required for claim 33, which needs further search for the additional elements claimed therein.

The requirement is still deemed proper and is therefore made **FINAL**.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1 – 4, 6, and 10 – 32 are rejected under 35 U.S.C. 102(b) as being anticipated by Hills (U S Patent No. 5,344,297).

Hills ('297) discloses the apparatus for extruding the wide variety of the fibers with configuration in a spin pack which includes the plurality of distribution plates which are arranged in side by side with stack position. (See figure 1). It also comprises the distribution network that delivers the molten material to orifices in the fiber extrusion pack. (See abstract).

Furthermore, it teaches that the distribution plate comprises the gap which disposed between adjacent the plurality of segment. (See figure 1 and abstract). Figure 1 also discloses that the cavities (19, 20) are formed in the adjacent the edges of the plate segments, which are shaped to form the cylindrical inlet port as the reservoirs (17, 18). The reservoirs are counterbored to receive respective annular seals (21), which prevent leakage of the molten material from the fiber extrusion pack. It also teaches that placing a plugging material in the reservoirs at pack assembly forms the sealing plugs. (See col.10, line 10 – 20).

Hills ('297) discloses the plurality of the distribution plates, which have separate reservoirs because the gap of the adjacent plates are non-aligned. It also includes that the gap of the distribution plates are aligned to common aperture as a common reservoir to receive the sealing material. (See figures 1 – 10; and col.11, lines 25 – 35).

Hills ('297) disclose the plate segments in which each segment has one dowel pin hole to receive the dowel pin, which aligns the plate segment of the distribution plate with corresponding to the plate segments of other distribution plate in the fiber extrusion pack that means each plate segments includes the set of the dowel pin holes. (See col.13, line 30 – 35).

Hills ('297) discloses the plate segments wherein the plate-to-plate alignment of the first segment is independent of the plate-to-plate alignment of the second plate segment. (See figures 19 – 21). Here, Hills ('297) discloses the star shaped of the gap between the plate segments. But it also discloses that the star shape is not crucial, it can be a rounded square, rounded rectangular, rounded triangle, a circle, or substantially any shape of the gap which extends through the pattern of distribution channels formed on the adjacent plate segments. (See col. 16, lines 50 – 61).

Hills ('297) discloses the apparatus with the continuous distribution pattern which is formed on adjacent plate segments, and where in adjacent edges of the adjacent plate segment are shaped such that the gap extends through the continuous distribution pattern without interrupting the continuous distribution pattern. (See abstract).

Hills ('297) discloses all the claimed structural limitations, and, thus, the claims are anticipated.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

Art Unit: 1722

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

Claims 5, 7 and 8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hills ('297) in view of Kiriya et al. (U S Patent No. 4,414,276).

Hills ('297) discloses all structural limitation as discussed above. It also discloses the sealing plugs for preventing the leakage of the molten material from the fiber extrusion pack, but Hills ('297) does not specify that the molten material solidifies in the reservoirs.

In the analogous art, Kiriya ('276) discloses the sealing plugs which are made from the molten material that leaks into the gap (depression) and collects and solidifies into the reservoirs. (See col.6 line 1 – 14). It also discloses the plugging

Art Unit: 1722

material (molten material) is injected as a liquid into the reservoir and solidifies into the sealing plugs. (See col.5 line 53 – col. 6, line 14) and also the plugging material, which is solid when it is placed in the reservoir and is melted and hardened into the sealing plug upon placing the fiber extrusion pack in a preheater. (See col.32 line 30 – 35).

It would have been obvious to one of ordinary skill in the art at the time of Applicant's invention to have modified the fiber extrusion pack including the split distribution plates of Hills ('297) with the molten material solidifies in the reservoirs, because such an alignment is supporting the process of extruding fibers forming polymers, and separating the fine fibrous stream by solidifying from other polymers as suggested by Kiriyaama ('276).

Allowable Subject Matter

Claim 9 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The following is a statement of reasons for the indication of allowable subject matter:

The prior art of record fails to teach or suggest the fiber extrusion pack including the split distribution plates having the reservoirs with the gravity as defined in claim 9. The closest prior art of Hills (U S Patent No. 5,344,297), and Kiriya et al. (U S Patent No. 4,414,276) are described above. These references do not teach or suggest the limitation of the claim that is the reservoirs lie along angled portions of the gap such that the gravity causes the molten material plugging material to flow toward and plug exterior opening of the reservoirs.

Conclusion


The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dimple N. Bodawala whose telephone number is (571) 272-6455. The examiner can normally be reached on Monday - Friday at 8:30 am - 5:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Yogendra N. Gupta can be reached on (571) 272-1316. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 1722

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



YUGENDRA K. GUPTA
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 1700

DNB